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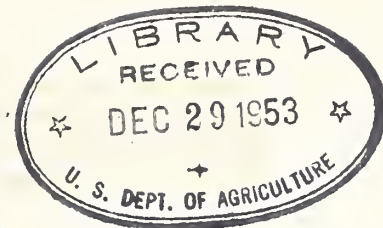
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WORK SIMPLIFICATION IN THE HOME  
VISUAL AIDS\*  
June 1953



California

Julia Pond sent the following syllabus explaining work simplification slides:

1. This low-cost laboratory was built with prison labor in one of the counties. The demonstration kitchen is part of a large meeting room. The women can actually see what the home adviser is talking about and try their own hand at kitchen planning. They can use this area for training meetings and food preparation. The up-to-date equipment shown here was a cooperative venture. The various manufacturers helped make it possible through their educational plans. For instance, the stove was purchased at a special low price, with a replacement agreement by the manufacturer. A special loan plan at no cost made the refrigerator and freezer possible, and a replacement agreement came with them so they will be replaced as the new models come out. The Madera County home economics extension laboratory has a kitchen compact and convenient, three different working heights, mixing cabinet, sink, and range with cabinet by it. You can't see the range in slide -- the door could not be moved as it is a broken L kitchen.
2. Another part of this laboratory has been outfitted for clothing and home furnishing work. A folding cabinet in one corner opens to form a dressing room. A table 25 inches high made for sitdown work is used for pressing. The cutting table goes up or down on blocks to get the right work height. The clothing area in the Madera County laboratory is compact and step saving, with correct working heights.
3. Here's every good home adviser's dream! A door from this meeting-room kitchen opens into the warehouse part of the demonstration building. These cabinets are where the home adviser stores her demonstration materials. And notice how she can drive her car right into the building. No more endless steps and strained backs loading and unloading supplies. This room is adjacent to the meeting room. This is also the Madera County laboratory.
4. Another county has facilities that are more elaborate and costly. This mixing cabinet shows careful planning and good arrangement. Its counter is 32 inches high (a good working height) and placed conveniently between the refrigerator and the electric range. Mixing cabinet, everything is brought within easy reach.
5. Exhibits are another good tool for home advisers. This exhibit at a recent county fair shows correct work heights. The women had an opportunity to find their correct work heights, and there are project leaders in the booth at all times to help with the explanations. Several counties have had a similar exhibit.

(California slide No. 9)



6. Planning is important in the kitchen, too. In many homes the kitchen is the most used room, so kitchens should be efficient, comfortable, and attractive. This room has all these desirable qualities -- work simplification applied to kitchen planning, motions and steps reduced. (California slide No. 26)
7. A simple rack that can be made by a family member will help when a sink can't be raised to the proper height. This will eliminate many backaches without upsetting the family budget. The rack is not very often used but it does help solve sink height problem. Many women object to the fact that it is bulky and may absorb water. (California slide No. 29)
8. Sitting to work is no longer a mark of laziness. A lapboard, such as this one built into a cupboard, will let the worker sit comfortably with her feet flat on the floor. (California Slide No. 30)
9. Installing lapboards in old cupboards is not always possible, but a table such as this one can serve the same purpose, with the added advantage that it can be used in any room in the house. In the next slide the lap table is used for ironing. (California slide No. 31)
10. Here a home adviser is applying work-saving principles to ironing a man's shirt. She is using the best tools and equipment, has everything within easy reach, and she is sitting down. Many of the homemakers in her county will soon be ironing a shirt in 5 minutes instead of 15 or 20, and perhaps they will use that extra time to enjoy their children. (California slides No. 32)
11. All homemakers, however, don't have the wide ironing boards the home adviser is using, so she is prepared to teach them how to use the simple ironing methods on a standard-size board. (California slide No. 33)

### Florida

Mrs. Bonnie Carter sent a set of flash cards, about 4 by 12 inches, used in connection with program on "How Do You Work?" The cards had questions such as, Are you a putterer? A never-get-througher? A putter-offer? A martyr?

### Iowa

See excerpts from home management specialists' letters on work simplification in the home program.

### Kentucky

See excerpts from home management specialists' letters on work simplification in the home program.

### Kansas

Mrs. Self sent pictures and slides on her study of laundry sorting which she uses to interest women in work simplification. The readers of the slides are as follows:

1. Mrs. Wilcox poses for her picture demonstrating standing with good posture.
2. Mrs. Wilcox has to carry the basket of soiled clothes to the room where she always sorts. The basket weighs from 15 pounds to 30 pounds or more. Here is

demonstrated the poor way to pick up and carry a load.

3. Say the basket of clothes weigh 15 pounds. Research has proved the point that when lifting this weight the back muscles have a strain of 63 pounds placed on them and only 17 pounds strain on the legs. This is bad!
4. Now the worker who wishes to protect back muscles, lowers herself by bending her knees down to the task. Then, after she grasps the load, her strong leg muscles raise her and her load. The back load is 27 pounds and the leg load 47 pounds. All lifting in zone 3 takes much energy.
5. Here Mrs. Wilcox has found an easier way to carry the load by holding it to one side and near her body, but one of her friends has suggested an even better way. Let's see what it might be.
6. Yes, a load of this kind is much more easily handled on wheels. Wheels should be used on carts, tables, and service wagons to make work easier and to save steps.
7. Worker preparing to sort the wash. One percent of the sorting time was spent at near perfect posture. No sorting done! Mrs. Wilcox has an average weekly wash of 37 to 40 pounds.
8. Mrs. Wilcox spent 11 percent of her sorting time in this angle of bend. Here she straightened and studied which sort pile she should place the soiled item on
9. While she was in this angle she was also doing the loading of the wash. She was in this angle as she placed soiled items in the hot, sudsy water.
10. Here Mrs. Wilcox drops to the 46-degree to 15-degree angle. She spends 25 percent of her sorting time in this position. She was in this area while sorting from the uppermost third of the basket. This is fatiguing!
11. Goodness, what's this? Yes, she is here between a 15-degree and a 0-degree angle about 36 percent of the total period. What is she doing? Well, she's sorting on down through the center of the basket. Looks like good, hard work, doesn't it?
12. Oh no! Not this. Yes, Mrs. Wilcox has her head lower than her hip or 0 degree and even down to the -15-degree angle. She spent 20 percent of her time here. What doing? Well, she's sorting from the lowest third of the basket and using 19 times as much energy as one uses in perfect posture.
13. Can't believe this - but it's true. She is now in a -15 degree to -45-degree bend. She's picking up a washer load of clothes from the floor. Yes, and she's not bending her knees enough to protect her back muscles.
14. When the wash is sorted on the floor much space is used, much energy used, time lost, and oftentimes more soil added. The 37 pounds of clothes took a space 4 by 6 feet.
15. The ideal place for sorting is a "sort table." The space generally recommended for a 40-pound wash is a table 3 feet wide and 6 feet long. This table might be hinged to the wall, and when not in use it could be flush with the wall.



16. However, many homes do not allow the space for a sort table. A set of boxes 12 by 12 by 16, covered with plastic and so chosen that 3 could be meshed together could be placed in zone 1 of the worker. A box of this size will hold 8 pounds, the recommended load for the majority of washers.
17. Mrs. Wilcox is finding a better way to sort clothes. Here, in the good angle of 90 degrees to 75 degrees, she spends 25 percent of her sorting time.
18. The micromotion film was used to film this study. Mrs. Wilcox spent 75 percent of the better method sorting period in this angle, or 75 degrees to 45 degrees. She never was below this angle. She sorted in two-thirds of the time of the old method. There was a great saving of energy, which we were unable to study.
19. Part of this time was spent loading the washer.

#### Massachusetts

Verda Dale's charts on energy requirement and dish storage are available to local leaders since they have been multilithed. The energy requirement chart comes on 6 to 8 by 10-inch sheets that can be pasted together. Verda Dale also sent a set of slides that showed before and after arrangements of a kitchen that a college student doing an honors problem did at a cost of \$10. The changes in the kitchen consisted of rearranging storage space and placing materials where they were first used. The flow charts show the amount of walking done making an apple pie before and after the kitchen was rearranged.

#### New Jersey

Doris Anderson sent several sets of Kodachrome slides on-

- a. Storage of linens, before and after.
- b. Storage of dishes, before and after.
- c. Drawer storage, before and after.

#### New York

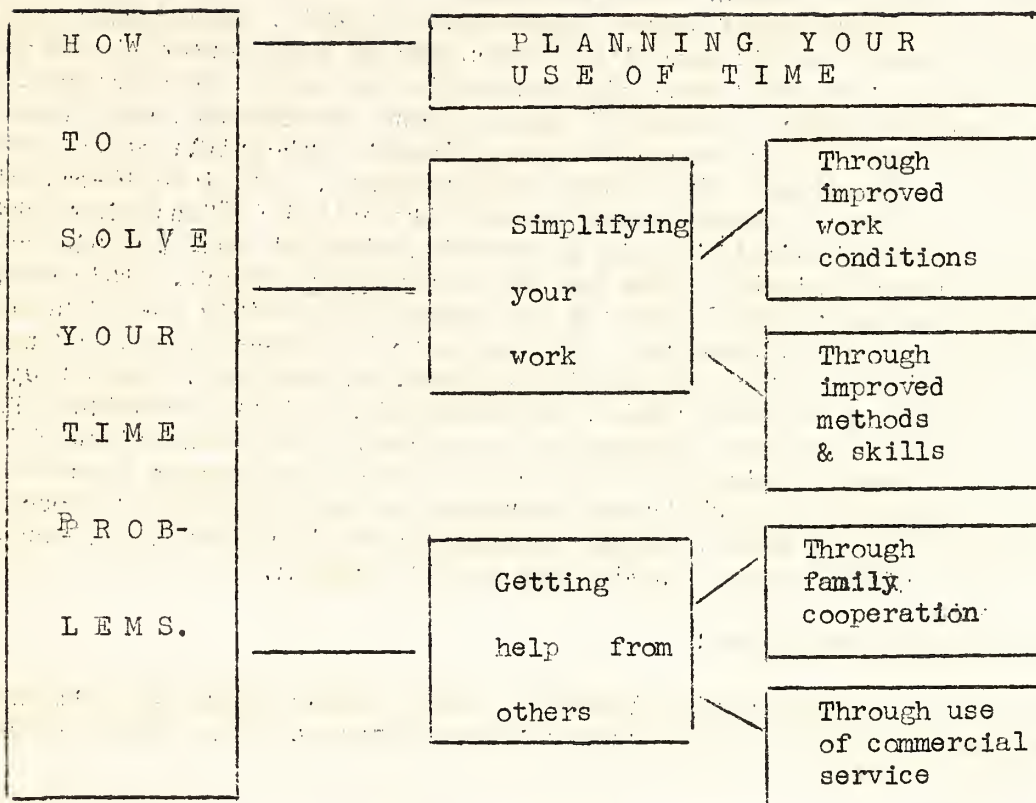
An excellent movie on "Within Your Reach" is available from New York. Mrs. Heiner supervised the filming.

#### Oregon

In Mary Beth Minden's annual report for 1952 there is a description of motion and time study slides that she uses in time management and short cuts in housekeeping meetings. They include improved methods of making biscuits, shaping cookies, frosting cupcakes, the importance of good tools, use of paper in the kitchen, peeling vegetables and garbage disposal, dishwashing and "carrying" equipment.

A chart used in "Living Within 24 Hours a Day" programs follows.





Graph sticks are also used with the chart indicating by length the amount of time used for sleep and rest, homemaking activities, personal care, farm work, other work, leisure, and miscellaneous and unaccounted time.

#### Washington

Helen Noyes sent slides and has this to say about visual aids:

You ask in your letter for a list of movies and slides that we are using. I do not use movies to any great extent, but I use slides at nearly every meeting that I hold, other than leader-training meetings. The slides that I have are those that have been taken in our own State and are not made up in sets. The other day as I was sorting slides for a meeting someone asked me how many times they had been sorted and I said I had no idea. I find that I have to use the slides that apply to the meeting and therefore I have no "sets." I have tried assembling a few sets for agents to use, but I find that even this does not work, since the pictures have to tell the story that is trying to be told at the meeting. A good many of our counties have made extensive use of the movie entitled, "The Step-Saving U Kitchen;" and the filmstrip of the same title. This has been used extensively to introduce kitchen planning to groups in counties. Personally, I have not used it to any great extent, as it has not been the thing that I needed for my meetings. As I said before, it has proved very useful to agents in developing programs and in giving women in counties a view of what can happen in the kitchen.

When the research study was done on the location of dishwashers in a kitchen plan, Anne Wood, of our research staff, had a movie made of this. She worked closely with the extension staff on it, and it has been used to some extent by our extension agents. Unfortunately, we had some difficulty with it, and it has not been available as much as we had hoped. I used it in my agents' conference when I had an opportunity to give agents some material on equipment. The title of this movie is "The Dishwasher, Its Location, Its Counter Requirements." It is a 16-mm. silent color film. We also have a 16-mm. sound color film entitled "Hand Dishwashing," based on a study of work simplification in washing dishes by hand. This was done several years ago when Elizabeth Wiley was on our research staff. This movie on hand dishwashing has been used by some of our agents in training 4-H Club leaders in work simplification in dishwashing. It has also been used by some of them to show how the principles of work simplification apply to one job. Then they follow this up with application to other jobs. Our extension bulletin entitled "Doing the Dishes" is based on the same information as given in the hand dishwashing movie. We prepared this bulletin primarily for use in our 4-H Club program because our 4-H girls were graded down in their meal contests on the dishwashing process more than in any other field of work. We are hoping that this bulletin will bring us some better results. It is also used in our adult program.

Slides sent by Helen Noyes were:

1. A kitchen mixing center with a lapboard. This picture shows how she uses the pull-out boards with her food chopper to save stooping. The bowl on the lapboard catches "drips."
2. This is the same mixing center as in Slide 1, showing supplies stored one row deep.
3. Partitions in the drawer make silver easy to store and easy to reach.
4. This kitchen was planned with no shelves under the work counter. All utensils and supplies are stored in drawers that pull out easily.
5. A range center with everything there that is used there.
6. A small area planned to make telephoning easier.
7. In a family with five little boys growing up in a rainy climate, mud tracked into the house becomes a problem. This boot-cleaning device is built at the rear door. It contains a water faucet and a floor drain for washing mud from boots.
8. A closet door used for storage at easy-reaching level.
9. A sewing corner in a kitchen. This homemaker does little sewing for her family but does lots of mending. This corner is a part of her kitchen.
10. A cleaning closet with "easy -to-reach storage." Card tables are stored here, too.



11. An ironing area for sitdown ironing. The table is a movable cart, basket is on a wooden box to get it up to the right height, hangers hold freshly ironed shirts and dresses.
12. Sorting table built of rough lumber. The clothes chute is above the basket. The shelf is for supplies.

### Wisconsin

Mrs. Margaret McCordic sent slides on a Heart Kitchen and has this to say about visual aids:

Most of the chairs used in the kitchen are the Cosco. Those were cut for the different areas. For example, the chairs in the dining area were cut down to a height that would fit the dining bar. The one No. 56 in the floor plan was cut to fit the work height at the sink, and the one No. 63 in the mixing area was cut to fit the height there. Since these were purchased, the equipment company has given us an RUC model with upholstered back and cushion and equipped with casters. The only problem with putting casters on that model, unless the company will cut the legs, is that it is too high for the 18-inch position. This particular chair is easily adjusted from 18 inches to 26 inches and may be advantageous since one chair can be used at any height.

I am enclosing a circular showing the different models because this company is furnishing coupons to the Heart Kitchen and anyone who attends the classes there can get an adjustable chair at wholesale price. They have given one to the Heart Kitchen and one to us to use in the trailer kitchen.

### Kodachrome Slides of the Heart Kitchen, Madison, Wisconsin Vocational School:

This is a result demonstration in cooperation with the Extension Service, Vocational School, and Wisconsin Heart Association.

This kitchen was planned for the person of average height which we consider 5 feet 4 inches. We have four different heights - 32 inches at the mixing center, 36 inches at the cooking center, 38 inches at the cleanup center, and 24 inches at the lapboard in the wheel cart. The chairs all have adjustable backs and were cut to fit the height where they are used.

The light is cove lighting, copied after the lighting shown in the "Step-Saving U Kitchen."

Gertrude Hoffmann, our house furnishings specialist planned the color so that it would be cheerful and harmonious.

The floor covering is vinyl plastic, which is easy to clean and does not need waxing unless desired. The counters are plastic, with the exception of the counter at the left of the range which is stainless steel and the counter at the mixing center which is maple.

1. Mixing center -- This shows the arrangement of the refrigerator, counter 32 inches high, and built-in oven at the end for convenience. There is a shallow shelf between the base and upper cabinet to help bring supplies close to the worker. A chair is used here which has been cut to fit the person of average height.

2. Mixing center with worker -- Shows a worker using this center. The shelves and the drawers at her left are convenient to reach.
3. Another view of mixing center showing the storage open -- A hardwood top has been put here so that it could be used for making salads or rolling out and cutting cookies or rolls.
4. Built-in Oven -- This shows the use of the built-in oven at the end of the mixing center. It is a convenient height for putting pans in, as well as for seeing.
5. Base storage in mixing center -- This shows the divided drawers with tools and supplies for use at the mixing center, also pullout shelves at the left. One reason metal cabinets were used is because they open and close with minimum energy.
6. Revolving corner -- Near the range for storage of supplies and pans used there. The wall cabinet at the left of the revolving corner is equipped with adjustable shelves and is convenient for pans used at the range. At the left are the electric units with drawer storage below.
7. Cooking center -- This shows the electric units with the hood over them and also some divided storage. This ventilating system is probably larger than most kitchens need, but this is in a public building and the air has to be removed by pulling it 60 feet to the roof. However, many families have been much interested in this type of hood and ventilating system. These mesh filters are easily removed and can be washed in the dishwasher.
8. Cleanup center -- This shows the sink with dishwasher at the left and dish storage above. This dish storage opens from both sides for convenience in setting the dining bar. A stainless steel sink was used because it is easy to clean and is 7 inches deep instead of 8 inches. It seemed difficult to find a more shallow sink in the porcelain enamel on iron; it was possible to find one in steel.
9. Cleanup center with worker sitting at sink -- The dishwasher has been placed at the left so the worker can use the area at the right for stacking and work from right to left, putting the dishes in the dishwasher without crossing arms.
10. Storage at cleanup center -- This shows the drawer storage. The top drawer is storage for cutlery for preparation of vegetables at the sink. The second drawer is for bread because the dishes are stored above. The eating bar is connected at the back. Below the bread is a drawer for vegetable storage. A small wheel cart has been made to slide under the counter.
11. Dining Bar -- Shows the dining bar at the back of the cleanup area. There is a 10 inch serving shelf between the cleanup center and dining bar. This is convenient for serving and for passing used dishes back. The wheel cart can be used for extra service area and the pullout drawer at the end for silver. A lapboard is built into this wheel cart.



12. Business and relaxing center -- This room was too small to arrange the type of relaxing corner which we would have liked, but this corner has worked out very nicely for the business desk and for a comfortable chair. The bottom drawer at the left is upholstered like the chair so the worker can relax. There are shallow drawers at the top for convenient storage. The second drawer at the left is made deeper for filing manila folders.
13. Storage for dining center -- Dishes and linens used in the dining area in the living room are stored here. This is convenient to the kitchen as well as the dining area in the living room. All shelves in the base cabinet pull out easily, and upper shelves are adjustable if desired. The section at the lower left is used for a roaster which is on wheels. Two double outlets are here for convenience in using electrical appliances if desired.
14. Storage for ironing and canned goods -- Almost across from 13 is shelf storage for an ironing board on casters, for canned goods, and for other supplies. This was made shallow for convenient storage as well as to save width in this passageway.

#### West Virginia

Gladys Wasmuth tells about some of her visual aids:

The yellow wheel is a rough sketch of one of the best ideas I have had exhibited at training meetings. Mrs. Robinson said that this year she taught school. In order to get the work done and the house in order to leave each morning her family made up a work schedule which was posted on the bulletin board. Each member of the family had two assignments. She said the family had called them capers instead of household tasks. I think the Robinson family has had a lot of fun with this idea. The same idea could be used in other families. I felt this was an excellent example to use for this lesson.

The five small pictures I am sending are an example of a set of slides I have on inexpensive timesaving devices for homemakers. These slides are black and white. I have used them with several groups. The pictures I am sending represent ideas for storage. They are just very simple ideas for homemakers, however, I am constantly amazed at the interest shown when they are used.

#### U. S. Department of Agriculture Film Strips

##### A Step-Saving U Kitchen, No. C-2.

This slidefilm shows details of the step-saving U kitchen which was built in the laboratories of the Bureau of Human Nutrition and Home Economics, USDA, and designed according to work-simplification principles.

##### Measuring Home Management, No. C-12.

Based on research work reported in Michigan Circular Bulletin 211 and Experiment Station Folder 6. Shows the importance of proper home management and the establishment, through research, of a standard by which the managerial ability of a homemaker could be measured.

A filmstrip on the Expansible House: Planning for family living and furnishings will be available later.

USDA Flannelgraph

The Marriage Cycle. Cutouts of family members in beginning, expanding, launching and contracting stages, and of grandparents, have been distributed to all county home demonstration agents. Single sets are available from Mrs. Lydia Lynde, Extension Specialists in Parent and Family Life Education, USDA, Washington 25, D C.



